

What is Claimed:

1. A device for oxygenating ground water comprising
a length of tubing having an open upper end, an open lower end, a tubular wall extending from said upper end to said lower end, and a longitudinal axis,
a plurality of parallel electrically conductive plates within said tubular wall,
said plurality of plates having a spacing between adjacent ones thereof,
means for applying and electric potential across adjacent pairs of said plates and across said spacings,
a pump for moving water through said tubing from said lower end to said upper end, and,
means for vertically suspending said tubing within said vertical well.
2. The device of claim 1 and further comprising a filter in said open lower end of said length of tubing.
3. The device of claim 2 wherein said filter contains granulated activated carbon.
4. The device of claim 2 wherein said filter contains ion exchange material.
5. The device of claim 1 and further comprising means for directing all upwardly moving water in said tubing between two of said plurality of plates.

6. The device of claim 5 wherein said plurality of plates include two outermost plates and said device further comprises,
a first Jimson spacer at an upper end of said plurality of plates,
a second Jimson spacer a lower end of said plates, and
said means for upwardly moving water between said plurality of plates includes sealing said outermost plates against said first and second Jimson spacers.

7. The device of claim 5 wherein each of said plurality of plates has a first and a second opposing vertical ends and said device further comprises,
a first planar end member abutting said first vertical ends of said plurality of plates, and
a second end member abutting said second vertical ends of said plurality of plates.

8. The device of claim 1 wherein said pump further comprises
an inverted funnel having a frustoconical portion with a large diameter lower end and a smaller diameter upper end, and a tubular draft pipe extending upwardly from said smaller diameter upper end.

9. The device of claim 8 wherein said inverted funnel is positioned in said tubing above said plates.

10. The device of claim 8 wherein said pump further comprises
a compressor for compressing air, and
a tube extending from said compressor to a position within said tubing and
under said inverted funnel.

11. The device of claim 10 wherein said inverted funnel is positioned in said
tubing above said plates and said tube extending from said compressor has a
distal end positioned above said plates.

12. The device of claim 10 wherein said plates extend parallel to said
longitudinal axis.

13. A device for oxygenating ground water comprising
a well extending into the ground to a level below the water table,
a length of tubing having an open upper end, an open lower end, a tubular
wall extending from said upper end to said lower end, and a longitudinal axis,
a plurality of parallel electrically conductive plates within said tubular wall,
said length of tubing suspended in said well,
said plates having a spacing between adjacent ones thereof,
means for applying an electric potential across adjacent pairs of said plates
and across said spacings, and
a pump for moving water through said tubing from said lower end to said
upper end.

14. The device of claim 13 wherein said pump further comprises
an inverted funnel having a frustoconical portion with a large diameter lower
end and a smaller diameter upper end, and a tubular draft pipe extending upwardly
from said smaller diameter upper end.

15. The device of claim 14 wherein said inverted funnel is positioned in said
tubing above said plates.

16. The device of claim 14 wherein said pump further comprises
a compressor for compressing air, and
a tube extending from said compressor to a position within said tubing and
under said inverted funnel.

17. The device of claim 16 wherein said inverted funnel is positioned in said
tubing above said plates and said tube extending from said compressor has a
distal end positioned above said plates.

18. The device of claim 17 wherein said plates extend parallel to said
longitudinal axis.

19. The device of claim 13 and further comprising means for directing all
water moving through said tubing between two of said plurality of plates.

20. The device of claim 19 wherein said plurality of plates include two outermost plates and said device further comprises,

a first Jimson spacer at an upper end of said plurality of plates,

a second Jimson spacer a lower end of said plates, and

said means for upwardly moving water between said plurality of plates includes sealing said outermost plates against said first and second Jimson spacers.

21. The device of claim 19 wherein each of said plurality of plates has a first and a second opposing vertical ends and said device further comprises,

a first planar end member abutting said first vertical ends of said plurality of plates, and

a second end member abutting said second vertical ends of said plurality of plates.

22. The method of oxygenating ground water under a parcel of ground comprising the steps of

providing a plurality of wells in said ground where each well extends below said ground water level,

providing a plurality of oxygenation units where each oxygenation unit comprises

a length of tubing having an open upper end, an open lower end, a tubular wall extending from said upper end to said lower end, and a longitudinal axis,

a plurality of parallel electrically conductive plates within said tubular wall,

said plates having a spacing between adjacent ones thereof,

means for applying an electric potential across adjacent pairs of said plates and across said spacings,

a pump for moving water through said length of tubing from said lower end to said upper end, and

suspending one of said oxygenation units in each of said wells.

23. The method of claim 22 wherein said upper end of said tubing of said oxygenation unit is positioned below said ground water level.

24. The method of claim 22 wherein said wells have a spacing apart from one another of 20 to 24 feet.

25. The method of claim 22 wherein
each said pump of said oxygenation units comprises an inverted funnel having a frustoconical portion with a large diameter lower end and a smaller diameter upper end, and a tubular draft pipe extending upwardly from said smaller diameter upper end, and said method further comprises,

providing an air compressor having an output,

providing a plurality of lengths of tubing and

extending said length of tubing from said compressor output to said funnels of said oxygenation units.